



IFWO

RAW SEQUENCE LISTING

DATE: 08/27/2004

PATENT APPLICATION: US/10/738,917

TIME: 16:56:19

Input Set : N:\Crf3\RULE60\10738917.raw

Output Set: N:\CRF4\08272004\J738917.raw

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1 <110> APPLICANT: Hogrefe, Holly
2      Hansen, Connie J
3 <120> TITLE OF INVENTION: Polymerase Enhancing Factor (PEF) Extracts, PEF Protein
Complexes,
4      Isolated PEF Proteins, and Methods for Purifying and Identifying
5 <130> FILE REFERENCE: 4121.0116-02
6 <140> CURRENT APPLICATION NUMBER: US/10/738,917
7 <141> CURRENT FILING DATE: 2003-12-16
8 <150> PRIOR APPLICATION NUMBER: US/09/399,003
9 <151> PRIOR FILING DATE: 1999-09-20
10 <150> PRIOR APPLICATION NUMBER: PCT/ US98/05497
11 <151> PRIOR FILING DATE: 1998-03-20
12 <150> PRIOR APPLICATION NUMBER: US 08/957,709
13 <151> PRIOR FILING DATE: 1997-10-24
14 <150> PRIOR APPLICATION NUMBER: US 08/822,774
15 <151> PRIOR FILING DATE: 1997-03-21
16 <160> NUMBER OF SEQ ID NOS: 89
17 <170> SOFTWARE: PatentIn version 3.1
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 15
21 <212> TYPE: PRT
22 <213> ORGANISM: Pyrococcus furiosus
23 <220> FEATURE:
24 <221> NAME/KEY: misc_feature
25 <222> LOCATION: (1)..(15)
26 <223> OTHER INFORMATION: "X" represents any amino acid
27 <400> SEQUENCE: 1
W--> 28      Xaa Xaa Leu His His Val Lys Leu Ile Tyr Ala Thr Xaa Xaa Xaa
29      1              5              10              15
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32 <211> LENGTH: 15
33 <212> TYPE: PRT
34 <213> ORGANISM: Pyrococcus furiosus
35 <220> FEATURE:
36 <221> NAME/KEY: misc_feature
37 <222> LOCATION: (1)..(15)
38 <223> OTHER INFORMATION: "X" represents any amino acid
39 <400> SEQUENCE: 2
W--> 40      Xaa Xaa Xaa Pro Asp Trp Xaa Xaa Arg Xaa Glu Xaa Leu Xaa Xaa
41      1              5              10              15
43 <210> SEQ ID NO: 3
44 <211> LENGTH: 35
45 <212> TYPE: PRT
46 <213> ORGANISM: Pyrococcus furiosus

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ENTERED

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47 <220> FEATURE:
48 <221> NAME/KEY: MISC_FEATURE
49 <222> LOCATION: (1)..(35)
50 <223> OTHER INFORMATION: "X" represents any amino acid
51 <400> SEQUENCE: 3
W--> 52      Xaa Leu Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Xaa Arg Xaa
53          1              5              10              15
54      Leu Val Gly Lys Xaa Ile Val Leu Ala Ile Pro Gly Xaa Xaa Ala Xaa
55          20              25              30
56      Xaa Xaa Xaa
57          35
59 <210> SEQ ID NO: 4
60 <211> LENGTH: 18
61 <212> TYPE: PRT
62 <213> ORGANISM: Pyrococcus furiosus
63 <220> FEATURE:
64 <221> NAME/KEY: MISC_FEATURE
65 <222> LOCATION: (1)..(18)
66 <223> OTHER INFORMATION: "X" represents any amino acid
67 <400> SEQUENCE: 4
W--> 68      Xaa Xaa Xaa Pro Asp Trp Xaa Xaa Arg Xaa Glu Xaa Leu Xaa Glu Xaa
69          1              5              10              15
70      Xaa Xaa
72 <210> SEQ ID NO: 5
73 <211> LENGTH: 17
74 <212> TYPE: PRT
75 <213> ORGANISM: Pyrococcus furiosus
76 <220> FEATURE:
77 <221> NAME/KEY: MISC_FEATURE
78 <222> LOCATION: (1)..(17)
79 <223> OTHER INFORMATION: "X" represents any amino acid
80 <400> SEQUENCE: 5
W--> 81      Xaa Tyr Asp Ala Val Ile Met Ala Ala Ala Val Val Asp Phe Arg Pro
82          1              5              10              15
83      Lys
85 <210> SEQ ID NO: 6
86 <211> LENGTH: 24
87 <212> TYPE: PRT
88 <213> ORGANISM: Pyrococcus furiosus
89 <400> SEQUENCE: 6
90      Ala Asp Leu Val Val Gly Asn Thr Leu Glu Ala Phe Gly Ser Glu Glu
91          1              5              10              15
92      Asn Gln Val Val Leu Ile Gly Arg
93          20
95 <210> SEQ ID NO: 7
96 <211> LENGTH: 17
97 <212> TYPE: PRT
98 <213> ORGANISM: Pyrococcus furiosus
99 <220> FEATURE:

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100 <221> NAME/KEY: MISC_FEATURE
101 <222> LOCATION: (1)..(17)
102 <223> OTHER INFORMATION: "X" represents any amino acid
103 <400> SEQUENCE: 7
-> 104      Gly Ala Met Leu His His Val Lys Leu Ile Tyr Ala Xaa Lys Leu Arg
105          1              5              10              15
106          Lys
108 <210> SEQ ID NO: 8
109 <211> LENGTH: 18
110 <212> TYPE: PRT
111 <213> ORGANISM: Pyrococcus furiosus
112 <220> FEATURE:
113 <221> NAME/KEY: misc_feature
114 <222> LOCATION: (1)..(18)
115 <223> OTHER INFORMATION: "X" represents any amino acid
116 <400> SEQUENCE: 8
-> 117      Gly Ala Met Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Xaa Xaa
118          1              5              10              15
119          Arg Lys
121 <210> SEQ ID NO: 9
122 <211> LENGTH: 13
123 <212> TYPE: PRT
124 <213> ORGANISM: Pyrococcus furiosus
125 <400> SEQUENCE: 9
126      Met Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Leu
127          1              5              10
129 <210> SEQ ID NO: 10
130 <211> LENGTH: 16
131 <212> TYPE: PRT
132 <213> ORGANISM: Pyrococcus furiosus
133 <220> FEATURE:
134 <221> NAME/KEY: MISC_FEATURE
135 <222> LOCATION: (1)..(16)
136 <223> OTHER INFORMATION: "X" represents any amino acid
137 <400> SEQUENCE: 10
-> 138      Gly Xaa Xaa Xaa Pro Asp Trp Xaa Xaa Lys Phe Arg Lys Glu Glu Ser
139          1              5              10              15
141 <210> SEQ ID NO: 11
142 <211> LENGTH: 17
143 <212> TYPE: PRT
144 <213> ORGANISM: Pyrococcus furiosus
145 <400> SEQUENCE: 11
146      Gly Ala Ile Leu Leu Pro Asp Trp Lys Ile Arg Lys Glu Ile Leu Ile
147          1              5              10              15
148          Glu
150 <210> SEQ ID NO: 12
151 <211> LENGTH: 16
152 <212> TYPE: PRT
153 <213> ORGANISM: Pyrococcus furiosus

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154 <220> FEATURE:

155 <221> NAME/KEY: MISC_FEATURE

156 <222> LOCATION: (1)..(16)

157 <223> OTHER INFORMATION: "X" represents any amino acid

158 <400> SEQUENCE: 12

W--> 159 Xaa Met His His Val Ile Lys Leu Xaa Tyr Ala Thr Xaa Ser Arg Lys

160 1 5 10 15

162 <210> SEQ ID NO: 13

163 <211> LENGTH: 18

164 <212> TYPE: PRT

165 <213> ORGANISM: Pyrococcus furiosus

166 <400> SEQUENCE: 13

167 Met Leu Tyr Leu Val Arg Pro Asp Trp Lys Arg Arg Lys Glu Ile Leu

168 1 5 10 15

169 Ile Glu

171 <210> SEQ ID NO: 14

172 <211> LENGTH: 23

173 <212> TYPE: DNA

174 <213> ORGANISM: Artificial Sequence

175 <220> FEATURE:

176 <223> OTHER INFORMATION: synthetic

177 <400> SEQUENCE: 14

178 caycaygaha arythattta cgc

23

180 <210> SEQ ID NO: 15

181 <211> LENGTH: 23

182 <212> TYPE: DNA

183 <213> ORGANISM: Artificial Sequence

184 <220> FEATURE:

185 <223> OTHER INFORMATION: synthetic

186 <220> FEATURE:

187 <221> NAME/KEY: misc_feature

188 <222> LOCATION: (1)..(23)

189 <223> OTHER INFORMATION: "n" is a, t, g, or c

190 <400> SEQUENCE: 15

W--> 191 gccatdatna cdgcrtcgta ttt

23

193 <210> SEQ ID NO: 16

194 <211> LENGTH: 23

195 <212> TYPE: DNA

196 <213> ORGANISM: Artificial Sequence

197 <220> FEATURE:

198 <223> OTHER INFORMATION: synthetic

199 <400> SEQUENCE: 16

200 caycaygaha arythatata cgc

23

202 <210> SEQ ID NO: 17

203 <211> LENGTH: 20

204 <212> TYPE: DNA

205 <213> ORGANISM: Artificial Sequence

206 <220> FEATURE:

207 <223> OTHER INFORMATION: synthetic

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209     ardacdacyt grttttcttc
211 <210> SEQ ID NO: 18
212 <211> LENGTH: 1209
213 <212> TYPE: DNA
214 <213> ORGANISM: Pyrococcus furiosus
215 <220> FEATURE:
216 <221> NAME/KEY: misc_feature
217 <222> LOCATION: (1)..(1209)
218 <223> OTHER INFORMATION: "n" is a, t, g, or c
219 <400> SEQUENCE: 18
220     atgcttcacc acgtcaagct aatctacgcc acaaaaagtc gaaagctagt tggaaaaaag      60
W--> 221     atagtcnnnn nnnnnccagg gagtattgcg gctttggatg tgaaagcttg tgagggacta      120
222     attagggcatg gggccgaagt tcatgcagtg atgagtgagg cagccacca gataattcat      180
223     ccttatgcat ggaatttgcc cacgggaaat ccagtcataa ctgagatcac tggatttatc      240
224     gagcatgttg agttagcagg ggaacatgag aataaagcag atttaatttt ggtttgcctc      300
225     gccactgcca acacaattag taagattgca tgtggaatag atgatactcc agtaactaca      360
226     gtcgtgacca cagcatttcc ccacattcca attatgatag cccagcaat gcatagagaca      420
227     atgtacaggc atcccatagt aagggagaac attgaaagggt taaagaagct tggcgttgag      480
228     tttataggac caagaattga ggagggaag gcaaaagttg caagcattga tgaaatagtt      540
229     tacagagtta ttaaaaagct ccacaaaaaa acattggaag ggaagagagt cctagtaacg      600
230     gcgggagcaa caagagagta catagatcca ataagattca taacaaatgc cagcagtgga      660
231     aaaatgggag tagcgttggc tgaagaagca gattttagag gagctgttac cctcataaga      720
232     acaaagggaa gtgtaaaggc ttttagaatc agaaaaatca aattgaagggt tgagacagtg      780
233     gaagaaatgc tttcagcgat tgaaaatgag ttgaggagta aaaagtatga cgtagttatt      840
234     atggcagctg ctgtaagcga ttttaggccca aaaattaaag cagagggaaa aattaaaagc      900
235     ggaagatcaa taacgataga gtcgttccn nnnaatccca aaatcattga tagaataaag      960
236     gaaattcaac caaatgtctt tcttgttga tttaaagcag aaacttcaaa agaaaagctt     1020
237     atagaagaag gtaaaaggca gattgagagg gccaaaggctg acttagtcgt tggtaacaca     1080
238     ttggaagcct ttggaagcga ggaaaaccaa gtagtattaa ttggcagaga tttcacaaaa     1140
239     gaacttccaa aaatgaaaaa gagagagtta gcagagagaa tttgggatga gatagagaaa     1200
240     ttntgtcc
242 <210> SEQ ID NO: 19
243 <211> LENGTH: 403
244 <212> TYPE: PRT
245 <213> ORGANISM: Pyrococcus furiosus
246 <220> FEATURE:
247 <221> NAME/KEY: MISC_FEATURE
248 <222> LOCATION: (1)..(403)
249 <223> OTHER INFORMATION: "X" represents any amino acid
250 <400> SEQUENCE: 19
251     Met Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Ser Arg Lys Leu
252     1             5             10             15
W--> 253     Val Gly Lys Lys Ile Val Xaa Xaa Xaa Pro Gly Ser Ile Ala Ala Leu
254     20             25             30
255     Asp Val Lys Ala Cys Glu Gly Leu Ile Arg His Gly Ala Glu Val His
256     35             40             45
257     Ala Val Met Ser Glu Ala Ala Thr Lys Ile Ile His Pro Tyr Ala Trp
258     50             55             60

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RAW SEQUENCE LISTING ERROR SUMMARY
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 1,2,13,14,15
 Seq#:2; Xaa Pos. 1,2,3,7,8,10,12,14,15
 Seq#:3; Xaa Pos. 1,14,16,21,29,30,32,33,34,35
 Seq#:4; Xaa Pos. 1,2,3,7,8,10,12,14,16,17,18
 Seq#:5; Xaa Pos. 1
 Seq#:7; Xaa Pos. 13
 Seq#:8; Xaa Pos. 15,16
 Seq#:10; Xaa Pos. 2,3,4,8,9
 Seq#:12; Xaa Pos. 1,9,13
 Seq#:15; N Pos. 9
 Seq#:18; N Pos. 67,68,69,70,71,72,73,74,75,930,931,932,933,1203
 Seq#:19; Xaa Pos. 23,24,25,311,401
 Seq#:32; N Pos. 15
 Seq#:33; N Pos. 15
 Seq#:34; N Pos. 15
 Seq#:35; N Pos. 15
 Seq#:36; N Pos. 20,66
 Seq#:37; Xaa Pos. 12,22
 Seq#:38; Xaa Pos. 7,22
 Seq#:39; Xaa Pos. 7,9
 Seq#:41; Xaa Pos. 1
 Seq#:42; N Pos. 665,684,686,697,699,700,703,740
 Seq#:43; Xaa Pos. 7,9,14,24,26,30,50,52,64,76,78,96,118,121,134,139,153,209
 Seq#:43; Xaa Pos. 213,221,228,232,233,234,237,246
 Seq#:44; Xaa Pos. 105,129,198,206,215,222,225,228,229,232,233,234
 Seq#:45; Xaa Pos. 43,60,110,117,155,162,170,180,195,222,227,229,233,234,235
 Seq#:45; Xaa Pos. 243
 Seq#:46; Xaa Pos. 23,24,25
 Seq#:51; Xaa Pos. 84,85,86,87,88,97,98,99,100,154,155,180,181,182,183,184
 Seq#:51; Xaa Pos. 185,287,288,290,311,322,323,324,325,333,348,389,390,417
 Seq#:51; Xaa Pos. 434,435,436,437
 Seq#:52; Xaa Pos. 104,105,106,107,144,145,173,197,198,294,295,340,368,369
 Seq#:52; Xaa Pos. 370,371
 Seq#:53; Xaa Pos. 1,3,4,6,7,8,9,11,12,13,14
 Seq#:72; Xaa Pos. 1,3,4,6,7,8,10,11,12,13

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 3

VERIFICATION SUMMARY

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Input Set : N:\Crf3\RULE60\10738917.raw

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L:28 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:40 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:52 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
M:341 Repeated in SeqNo=3
L:68 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
M:341 Repeated in SeqNo=4
L:81 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:104 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:138 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:159 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:221 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:60
M:341 Repeated in SeqNo=18
L:253 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:16
M:341 Repeated in SeqNo=19
L:422 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0
L:435 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:0
L:448 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0
L:461 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0
L:472 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:0
M:341 Repeated in SeqNo=36
L:484 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
M:341 Repeated in SeqNo=37
L:498 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:0
M:341 Repeated in SeqNo=38
L:512 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:0
L:535 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0
L:562 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:660
M:341 Repeated in SeqNo=42
L:574 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
M:341 Repeated in SeqNo=43
L:628 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:96
M:341 Repeated in SeqNo=44
L:662 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:32
M:341 Repeated in SeqNo=45
L:702 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:16
L:761 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:80
M:341 Repeated in SeqNo=51
L:829 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:96
M:341 Repeated in SeqNo=52
L:883 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53 after pos.:0
L:1070 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:0